

Claims

[c1] What is claimed is:

1. A structure for reducing cross-talk comprising:
an electric board comprising a ground layer; and
a plurality of adapting modules installed on the electric board, wherein only one of the adapting module can operate at a time; each adapting module comprising:
a plurality of slots for detachably accommodating a plurality of corresponding adapting devices; and
a plurality of buses electrically connected to the plurality of slots for transmitting signals and data, wherein when the adapting module does not operate, the corresponding plurality of buses are electrically connected to the ground layer of the electric board;
wherein the plurality of buses of the plurality of adapting modules are alternately laid out on the electric board.

[c2] 2. The structure of claim 1 wherein ends of a plurality of buses of at least an adapting module comprise a switch corresponding to the adapting modules for switching the ends of the plurality of buses between a predetermined voltage mode and a ground voltage mode.

[c3] 3. The structure of claim 2 wherein when the adapting

module does not operate, the switch corresponding to the adapting module switches the ends of the plurality of buses into the ground voltage mode, so that the plurality of buses are electrically connected to the ground layer of the electric board.

[c4] 4. The structure of claim 1 wherein at least one of the plurality of slots of at least one adapting module is detachably installed with at least a terminator card for electrically connecting the plurality of slots installed with the terminator card to the ground layer of the electric board.

[c5] 5. The structure of claim 4 wherein when the adapting module does not operate, the plurality of slots corresponding to the non-operating adapting module is installed with at least a terminator card for electrically connecting the plurality of slots installed with the terminator card to the ground layer of the electric board.

[c6] 6. The structure of claim 1 wherein each adapting module comprises a controller for controlling operations of the adapting modules.

[c7] 7. The structure of claim 6 wherein the controller comprises a MOS circuit for switching the controller between a predetermined voltage mode and a ground voltage

mode.

- [c8] 8. The structure of claim 7 wherein when the adapting module does not operate, the MOS circuit switches the controller to the ground voltage mode.
- [c9] 9. The structure of claim 1 being applied in a mother-board of a personal computer.
- [c10] 10. A method for reducing cross-talk in a different-buses-co-layout structure, the different-buses-co-layout structure comprising a plurality of buses for transmitting different types of signals and data, the method comprising:
alternately laying out different types of the plurality of buses on an electric board;
utilizing buses of only one type to transmit signals and data; and
electrically connecting two ends of each bus not transmitting signals and data to a ground layer of the electric board.
- [c11] 11. The method of claim 10 wherein the different-buses-co-layout structure comprises a plurality of adapting modules, wherein each adapting module corresponds a plurality of buses of one type, the method further comprises operating only one adapting module.

[c12] 12. The method of claim 11 wherein each adapting module comprises:

a plurality of slots for detachably accommodating a plurality of corresponding adapting devices; and

a controller for controlling operations of the adapting modules, the controller comprising a MOS circuit for switching the controller between a predetermined voltage mode and a ground voltage mode;

the method further comprising:

installing at least a terminator card into the plurality of slots of the adapting module that does not operate so that the plurality of slots installed with the terminator card is electrically connected to the ground layer of the electric board; and

utilizing the MOS circuit to switch the controller of the adapting module that does not operate to the ground voltage mode so that the controller is electrically connected to the ground layer of the electric board.

[c13] 13. The method of claim 11 wherein ends of the plurality of buses of the adapting module comprise a switch corresponding to the adapting module for switching the plurality of ends between a predetermined voltage mode and a ground voltage mode.

[c14] 14. The method of claim 13 further comprising utilizing

the switch to switch the ends of the plurality of buses corresponding to the adapting module which does not operate to the ground voltage so that the ends of the plurality of buses are electrically connected to the ground layer of the electric board.

[c15] 15. The method of claim 10 wherein the different-buses-co-layout structure is applied in a motherboard of a personal computer.

[c16] 16. A different-buses-co-layout structure for reducing cross-talk comprising:
an electric board comprising a ground layer; and
two adapting modules installed on the electric board comprising a first adapting module and a second adapting module, wherein the two adapting modules cannot operate at the same time, each adapting module comprising:
a controller for controlling operations of the adapting modules, the controller comprising a MOS circuit for switching the controller between a predetermined voltage mode and a ground voltage mode wherein when the adapting module does not operate, the MOS circuit switches the controller to the ground voltage mode;
a plurality of slots for detachably accommodating a plurality of corresponding adapting devices; and
a plurality of buses electrically connected to the plurality

of slots for transmitting signals and data, wherein when the adapting module does not operate, the corresponding plurality of buses are electrically connected to the ground layer of the electric board;

wherein the plurality of buses of the two adapting modules are alternately laid out on the electric board.

[c17] 17. The different-buses-co-layout structure of claim 16 wherein ends of the plurality of buses of the first adapting module comprise a switch for switching the ends of the plurality of buses of the first adapting module between the predetermined voltage mode and the ground voltage mode.

[c18] 18. The different-buses-co-layout structure of claim 17 wherein when the first adapting module does not operate, the switch corresponding to the first adapting module switches the ends of the plurality of buses into the ground voltage mode, so that the plurality of buses are electrically connected to the ground layer of the electric board.

[c19] 19. The different-buses-co-layout structure of claim 16 wherein the plurality of slots of the second adapting module is detachably installed with at least a terminator card for electrically connecting the plurality of slots installed with the terminator card to the ground layer of

the electric board.

[c20] 20. The different-buses-co-layout structure of claim 19 wherein when the second adapting module does not operate, the plurality of slots corresponding to the second adapting module are installed with at least a terminator card for electrically connecting the plurality of slots installed with the terminator card to the ground layer of the electric board.

[c21] 21. The different-buses-co-layout structure of claim 16 being applied in a motherboard of a personal computer.